Action research in the use of WOLF and other methods in support of practical group work in the School of Art and Design

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[The report below is a summary of a much longer document. For further details, please contact the authors]

Digital Media was validated as a subject within the School of Art and Design in 2001, combining awards in Video, Animation, Multimedia Communication and Design for Multimedia. Two level two modules, DM2003 Design, Planning, Evaluation and DM2004 Digital Media Production, were validated with a view to providing multi-disciplinary experience of working together in teams, for students from all four awards. DM2003 was to run in the first semester of the academic year and introduce students to methods and principles applicable to group based production of media artefacts while in the second semester, DM2004 provided the opportunity for the practical application of these principles. These two modules ran for the first time in the academic year 2001/02 but with limited success. Students expressed significant dissatisfaction with DM2003, which they found to be too abstract, too theoretical and too broad based. By the time DM2004 ran, considerable effort was required by the extended module team to provide students with an experience that enhanced their ability to work effectively as part of a multi-disciplinary team in the production of a media based artefact.

Two initiatives were undertaken during the first delivery of DM2004 in an effort to understand student requirements better and to begin suggesting a methodology to assist group based activity. First, preliminary research into student learning preferences was undertaken using the ASSIST questionnaire to try and identify if the module structure encouraged students to adopt surface learning techniques. ASSIST is the latest version of the well-known Approaches to Studying Inventory (ASI) originally compiled by Entwistle and Ramsden (1981) and was designed for use within Higher Education Institutions. The ASSIST inventory contains 52 items comprising 13 subscales and three main scales, plus two other sections, which ask students what the term learning means to them and requires them to identify preferences for different types of courses and teaching. The ASSIST questionnaire can be downloaded from http://www.ed.ac.uk/etl/publications.html#measurement. Analysis of the collected data was not totally conclusive since the use of this research method proved difficult given the complex factors at work within the University's modular scheme. However, some trends did appear to be emerging during this period.

Secondly, attempts were made to use the Wolverhampton Online Learning Framework (WOLF) as a tool to facilitate aspects of group work. As a result of these initiatives the current University learning and teaching project was proposed in order to identify factors affecting student performance on DM 2003 and to begin to develop more robust and practical design methodologies to improve student understanding and performance.

During the first semester of the academic year 2002/03, a new module team and module leader revised DM2003 as far as was possible while retaining the same learning outcomes as originally validated. The focus of the module was changed so that content and style of delivery were oriented toward the practical rather than the theoretical. Different methodologies were introduced to students to help them explore the group working process from different angles with students undertaking focussed tasks designed to encourage them to investigate principles within their own work. Students investigated their own learning preferences, their own personality traits and were expected to explain how these might influence their behaviour when placed in a team-working context. They also looked at how others within the team might behave given a different personality and a different learning preference. Students were also required to investigate and discuss the implications of modern communication technologies on traditional working practices and practical exercises were undertaken to familiarise the students with aspects of the WOLF environment.

Four distinct, and for most students, new methodologies were introduced to assist the practical aspects of group based activity during the module: Learning Style theory, to assist students' realisation that people think, learn and consequently act in different ways and to explore how knowledge of learning style can be utilised in group work; Edward De Bono's Six Thinking Hats (2000) to enable constructive discussion and decision making during group meetings; mind maps as described by Tony Buzan (2002) as a means of visually representing complex ideas and online information technology (WOLF) to provide a means of storing and sharing group information.

Discussions with students had clearly indicated that they needed to understand the relevance of what they were being asked to do within the module and how it related to their own specialist area of study. It was also generally understood by the staff team that Art and Design students preferred practical rather than theoretical activities to engage with and so it was decided to make each of the weekly taught sessions far more interactive with students being given practical tasks to facilitate understanding of relevant principles. Staff also felt that students would benefit from the use of practical methods related to effective group working and several were identified for inclusion in the module content. The format of the weekly taught sessions was changed to include a short presentation as an introduction to a practical method or concept, followed by a practical exercise in small groups to apply the method. The practical exercise was designed deliberately so as not to be related directly to Art and Design specialist activity. A concluding session then took place to promote discussion about how the method could be used effectively in an Art and Design context. Students were also given advice on how the events of the day could feed into their assessment tasks and in some instances, specific activities were suggested for them to undertake during the forthcoming week to either consolidate their understanding or to prepare for forthcoming activities.

Course content was expanded in order to try to establish a design methodology that the students would find relevant to their digital media studies. With this in mind learning style theory was covered in some depth to assist students to understand not only the role that their own learning style played in the way that they studied and worked, but also the way that learning style preferences could be deployed to advantage in group work through assigning tasks that, where possible, took advantage of an individual's natural learning style. Students were also introduced to the idea that being aware of their own learning style facilitated their strategically adopting another learning style when necessary.

The ASSIST questionnaire was designed to be delivered to large groups of students and not to provide individual feedback. The students were asked in week two to complete the online version of VARK http://www.vark-learn.com/ This is a learning style questionnaire that has been designed to focus on sensory modality preferences and it provides instant feedback to individuals. VARK was developed with the belief that "assisting students to

know themselves and to operate in a metacognitive fashion" (Fleming & Mills, 1992, p1) would aid their learning the most. Research undertaken by Fleming and Mills at Lincoln University, NZ found that most students attributed their learning difficulties to the way that course information was presented to them. VARK was developed to provide students with a quick way to "focus students' attention on the way they learn". Initial developments were based on Stirling's three categories of 'visual', 'aural' and 'kinsesthetic'. However the visual category was later split when it was realised that visual material could be presented either as written text or as images of one form or another. Consequently, a forth category of 'read/write' was added. The number of questions included in the VARK questionnaire was limited to only 13 in order to make it quick and easy to complete and situations from everyday life were chosen for twelve of the thirteen questions. VARK has been successfully used at Lincoln in order to help students better to understand the way that they learn and successfully modify their study habits in many cases.

Group activity is an important part of working in any digital media environment. Students on this module came from four different specialisms within Digital Media, and an aim of the module was to encourage them to work in mixed groups, with each contributing specialist knowledge to one end product. In order to facilitate the group working process, the students were introduced to De Bono's (2000) *Six Thinking Hats* methodology for conducting meetings. It was felt that this would give the students an approach to holding meetings that was not based on the normal 'defend your own viewpoint' basis. To help with planning their work in an appropriately visual manner, the students were then introduced to Tony Buzan's (2002) mind mapping theory and encouraged to use this as a methodology for recording their meetings and to plan out their work. Finally the students were also shown how to communicate using the bulletin boards in WOLF and how to use the folders option to upload work that they wanted to share with other group members. For most of the students this was their first experience of using a virtual learning environment.

It is clear that an overall improvement to the module and the student experience had been achieved as a result of this project. The more interactive nature of module delivery seemed to make the whole experience more enjoyable for both students and staff and attendance at module sessions remained high throughout the semester.

The introduction of new methods also proved successful particularly for mind mapping and the use of WOLF group folders. Subsequent investigation has identified a software application to support mind mapping and there will be a new project conducted during the 2003/04 academic year to develop the use of this software. Many students experienced difficulties with the individual written assignment and the main criticism was their ability to organise material into a coherent dialogue. Had they applied the mind mapping method to the design of their reports, many of their problems could have been overcome and this will be the focus of the project.

Six thinking hats was of interest to students and staff but not adopted at all by either group once the initial exercises were completed. This might be because of all the methods, this one would require the greatest change in personal behaviour patterns. Module staff will need to take the lead in developing their own use of this method in particular if there is to be any success in getting the students to adopt it.

Identification and understanding of individual learning styles was successful up to a point, although more work needs to be done in helping students understand how the information can be used effectively. To facilitate this it is intended to extend the investigation of individual characteristics into the understanding of personality and in particular the way that personalities operate within and affect group working.

The major benefit of WOLF during this project was in providing staff with a view on how student group work was progressing and in providing student access to course documentation. Few of the groups derived any benefit from the use of a common store for

working documents. Files were uploaded primarily to satisfy staff requests to do so, and none used the communication tools within the WOLF environment. It is intended to increase the level of instruction in relation to the use of this technology and more emphasis on assessment requirements and specifications to make it more explicit.

The benefit to staff must also benefit students if it improves the monitoring and feedback activities within the module but improved communication between staff and students will require more active use of the virtual forums. Alternatively the possibilities for text messaging to student mobile phones will be investigated. The problem of internal group communication is that the use of personal e-mail, text messaging and mobile phones cannot be monitored so that effective assessment of internal group communication is difficult other than by evaluation of the assessment artefact. This issue will continue to be developed by the subject team.

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